Deputy Project Manager – GS-15

Introduction

This position is within the Flight Programs and Projects Directorate (FPPD), Code 400. Multiple Deputy Project Manager positions exist within the Directorate, each performing the duties described in the sections that follow.

Major Duties

As the Deputy Project Manager for a FPPD Project, the incumbent is responsible for assisting the Project Manager with the planning, organizing, and directing technical and programmatic aspects of the project, and spanning diverse disciplines, which are necessary for the successful implementation in a flight program. Major duties of the incumbent are as follows.

a. He/she assists the Project Manager in developing and managing the overall plan for the overall plan for the implementation of the Project. The flight includes the space system, instrument complement, applications software, and the complement of payload instruments. The plan includes cost, schedule, division and assignment of technical tasks, and all technical and management interfaces. Every effort is made to utilize existing standards and low-cost spacecraft components. Power, weight, thermal, mechanical, command, control, flight data handling, and launch vehicle requirements are determined.

b. He/she assists the Project Manager in reviewing all budgetary requirements for the Project-funded elements of the flight and ground systems; including mission-unique equipment, applications software, and integration and test hardware.

c. He/she is responsible for assisting the Project manager in making and reviewing decisions involved in the definition, development, integration, and testing of the Project. Directs technical analyses and engineering efforts, which will assure the mission, will meet all of its unique objectives.

d. He/she assists the Project Manager in managing top-level schedule requirements for the spacecraft. Reviews detailed schedules developed by the contractor. Where necessary, initiates workaround plans to eliminate schedule conflicts. Responsible for ensuring that each subsystem is compatible with the top-level schedule.

e. He/she assists the Project Manager in formulating requirements to be met by the mission contractors and instrument contractors and assures overall progress in meeting the requirements; evaluating the work performed and procedures used by the mission and instrument contractors to determine progress in achieving the stated objective; investigating areas in need of improvement and/or making decisions involving the trade-off between schedule, cost, and technical performance.

f. He/she assists the Project Manager in evaluating the mission, instrument, and support contractors' technical and cost performance.

g. He/she assists the Project Manager in the oversight of the identification and resolution of critical and potential problem areas in the programmatic interfaces between the space systems, instruments, and other government-furnished equipment to make certain that the program requirements are met within cost and schedule constraints. Collaborates with other senior project management personnel in the planning and review of all Project elements, which include spacecraft subsystems, ground data systems, instruments, and mission operations

h. He/she assists the Project Manager in planning, organizing, directing, and controlling the efforts of a GSFC team and other GSFC support contractors to aid in the design of the spacecraft and instruments. The incumbent assists in the negotiations with the GSFC Division Chiefs and Branch Heads for this support, coordinates the work between the mission contractor, support contractors, and the GSFC team and prioritizes work.

i. He/she assists in the management of the development of interface control documents and remains cognizant of the effects the spacecraft subsystems have on other systems, including interface requirements on the instruments. Responsible for assuring the proper performance of the flight and ground system.

j. He/she assists in the determination of the types of actions and activities needed to successfully carry out the flight development program and establishes policies for their implementation. Assists in ascertaining the variety of experience and skills necessary to perform the multifaceted tasks required to manage the mission contractor and other activities related to flight development.

k. He/she visits the contractor's plants and instrument contractor's plants to assess progress to evaluate technical and programmatic problems, which may arise. Make decisions to redirect contractor efforts as necessary.

l. He/she prepares reports, which relate to flight development definition, progress, schedule, and costs. Represents the Project, GSFC, and the Agency on committees and in meetings as a recognized authority in the area of flight development.

m. He/she is responsible to his/her supervisor for assuring that performing a range of duties such as carries out the work assignments of other employees:

    - Distribute and balance the workload among employees in accordance with established work flow or job specification, and assure timely accomplishment of work.

- Instruct employees in specific tasks and job techniques and make available written instructions, reference materials, and supplies.

- Give on-the-job training to new employees in accordance with established procedures and practices.

- Maintain current knowledge and answer questions of other employees on procedures, policies, directives, etc., and obtain needed information or decisions from supervisor on problems that come up.

- Check on work in progress, spot check, and review completed work to see that supervisor's instructions on work sequence, methods, procedures, and deadlines have been met.

- Amend or reject work not meeting established standards, referring unusual situations to supervisor.

- Report to supervisor on performance, progress, and training needs of employees.

- Make "information suggestions" to supervisor as requested concerning promotion, reassignment, recognition, and personnel needs.

- Make recommendations concerning performance appraisals of employees in the work unit as required by the supervisor.

Factor 1 - Knowledge Required by the Position

a. A degree in an appropriate field of engineering, physical science, or mathematics is required to apply the professional theories, practices, principles, and techniques of aerospace technology to plan, develop, and implement the flight design, fabrication, integration, and test.

b. A broad technical knowledge of the tasks, concepts, and techniques of spacecraft and science instrument fabrication; integration and test to direct the design, development, integration, test, and launch of the spacecraft.

c. Knowledge of the duties and responsibilities of a technical officer on large contracts with a major aerospace company; knowledge of cost control techniques such as performance measurement systems; knowledge of procurement regulations; skill in analyzing financial data to understand the cost status of the contract and budget for changes.

d. Knowledge of proposal evaluation techniques; skill in estimating manpower needs to accomplish tasks; technical knowledge in all spacecraft systems and subsystem; knowledge of

techniques and skill in negotiating to evaluate proposed contract changes and negotiate such changes.

e. Knowledge of planning and scheduling techniques and systems such as PERT, Gantt, Office 2; skill in evaluating a schedule for realism to plan and evaluating the contractor's plan for developing and launching the spacecraft on schedule.

f. Skill in directing large diverse groups of companies and people such as the spacecraft mission contractor, support contractors, and GSFC engineers. Skill in resolving conflicts, delegating tasks, and assigning responsibility to coordinate the work of all the groups contributing to the development of the spacecraft. Skill in managing many different problems simultaneously.

g. Ability to work with discipline managers and independently provides the direction to technical experts as they perform their duties in support of the spacecraft development, integration, test, launch, and operations.

h. Skill in communicating orally and in writing to provide briefings, status reviews, resource requirements to Office and to higher management.

i. Ability to lead the effort of a group of professional engineers.

Factor 2 - Supervisory Controls

a. The Deputy Project Manager receives direction from the Project Manager in terms of broadly defined mission objectives, budgetary allocations, and a general schedule.

b. Assignments are generally assigned by the Project Manager (PM) and the incumbent may alter approaches and concepts with approval of the PM a the program progresses. The incumbent's decisions and judgments have a far-reaching effect on the success of the mission and are accepted as authoritative within and outside of the Agency.

c. Work is viewed in terms of meeting policy and programmatic objectives. Supervision is of an administrative nature.

Factor 3 – Guidelines

The Deputy Project Manager receives guidelines in the form of Project objectives and NASA's policies, and specific guidelines relating to budgetary and schedule restraints.

The incumbent interprets the broad objectives and as a recognized authority in the area of spacecraft development and is, with consultation with the PM, free to formulate specific requirements and to develop detailed cost, schedule, and technical plans. His/her product is a budgetary allocation by fiscal year, including a contractor performance measurement system; a

set of plans for the day-to-day activities; a set of integration, test, and launch procedures; and a set of post-launch operational plans and procedures.

Factor 4 – Complexity

The Deputy Project Manager must plan and organize information that is received from multiple sources. Decisions are made on cost, schedule, and technical risk. Schedule/risk trades are made across interfaces between science instruments, mission contractor, and support contractors. He/she must resolve technical and management difference of opinion between experienced industrial and government managers. This requires an in-depth understanding of the technical factors involved, the management methods for costing and manpower allocation, program objectives, and policies. Skill in managing many different problems simultaneously is required.

Factor 5 - Scope and Effect

The purpose of this position is to provide a source of technical expertise in the design, development, integration, test, and operation of the spacecraft. The incumbent directs and coordinates several diverse disciplines during the design, development, and integration phases of this effort. By providing expert advice, counsel, guidance and direction to key NASA officials, managers, and engineers (both within and outside the Center), the incumbent influences the policies of NASA, other government agencies, and foreign participants. Results of this activity have a direct and long-term effect on NASA's ability to achieve mission objectives, which impact a large user community on both a national and international level and expand our knowledge of the earth as a system.

Factor 6 - Personal Contacts

The Deputy Project Manager has daily personal contact with the members of the Project Staff as well as discipline support personnel from the various GSFC codes that are part of the Project/Program. He/she will also have daily contact with the senior managers and technical staff at the contractor's plant. He/she will have frequent contact with Division Chiefs and Branch Heads at GSFC and various senior technical and management personnel at other NASA Centers. The Deputy Project Manager will have contact with the senior management at GSFC (Directors of), with Division Managers of NASA Headquarters, and with senior scientists and managers from U.S. and European institutes on an as needed basis. The contacts occur in a variety of settings and context requiring an in-depth understanding of technical and managerial factors, which impact the successful accomplishment of the mission.

Factor 7 - Purpose of Contacts

Purpose of the contacts is to provide leadership, management, technical direction, and guidance in planning and implementing the mission systems and to justify, negotiate, and settle matters involving significant or controversial technical and programmatic issues. These issues are usually

varying and potentially have a large impact; requiring the incumbent to achieve satisfactory results relative to objectives of the efforts of contractors, other government and foreign agencies, good working relationships with national and international participants through consultation, advice, mutual discussion and conferences to identify areas of common development and to monitor common progress. Coordinates requirements and resolves conflicting, technical views arising from Joint Working Groups involving other U.S. government agencies and foreign participants. Supports international meetings--both management and technical in nature.

Factor 8 - Physical Demands

Typical engineering and management work is required. This includes working at a desk, attendance at meetings and conferences at GSFC, NASA Headquarters, etc. Significant domestic travel is required. No special physical demands are required.

Factor 9 - Work Environment

During the implementation phase, the normal work environment involves normal safety precautions typical of such places as offices, meeting rooms, and laboratories. During the integration, test, and launch phases, work involves longer hours at moderate risk, which requires special safety precautions.